

What is claimed is:

1 1. An apparatus for supporting an object to be fabricated, wherein
2 the object is supported spaciouly apart from a supporting surface of a
3 chuck comprising:

4 a plurality of sliding pockets sunken into the supporting surface of the
5 chuck; and

6 a plurality of sliding pads respectively floating-coupled in the sliding
7 pockets such that the sliding pads are spaced apart from the supporting
8 surface in order to provide adaptive support to the object to be fabricated to
9 compensate for the object's expansion and contraction.

1 2. The apparatus for supporting an object to be fabricated of claim 1,
2 wherein each of the sliding pockets includes a magnetic pocket body having
3 an internal space that confines a part of the sliding pad to prevent the sliding
4 pad from escaping, and a magnetic base cover spaced apart from a lower
5 part of the sliding pad for enabling the sliding pad to be connected to or
6 disconnected from the pocket body in one direction.

1 3. The apparatus for supporting an object to be fabricated of claim 2,
2 wherein the sliding pad includes a sliding body with parts having a magnetic
3 polarity identical to the magnetic polarity of corresponding parts of the
4 pocket body and base cover to allow the sliding pad to move freely in the
5 internal space of the pocket body with no contact to the sliding pocket, and a
6 supporting member installed at a part of an upper surface of the sliding body.

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1 4. The apparatus for supporting an object to be fabricated of claim 3,
2 wherein the corresponding parts of the sliding pocket and sliding body are
3 made of the same magnetic substance.

1 5. The apparatus for supporting an object to be fabricated of claim 3,
2 wherein the sliding pad is in a reverse T shape.

1 6. The apparatus for supporting an object to be fabricated of claim 3,
2 wherein the lower part of the pocket body and the base cover are fixed at a
3 predetermined depth into the supporting surface of the chuck.

1 7. The apparatus for supporting an object to be fabricated of claim 3,
2 wherein the supporting chuck is an electrostatic chuck for adsorbing an
3 object to be fabricated through the supporting member by electrostatic force.

1 8. The apparatus for supporting an object to be fabricated of claim 3,
2 wherein the object to be fabricated is a semiconductor wafer used for
3 manufacturing a plurality of semiconductor devices simultaneously.

1 9. A method for fabricating an apparatus for supporting an object to
2 be fabricated, wherein the object is supported spaciouly apart from a
3 supporting surface of a chuck comprising:

4 sinking a plurality of sliding pockets into the supporting surface of the
5 chuck; and

6 forming a plurality of sliding pads respectively floating-coupled in the
7 sliding pockets such that the sliding pads are spaced apart from the

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8 supporting surface of the chuck in order to provide adaptive support to the
9 object to be fabricated to compensate for the object's expansion and
10 contraction.

1 10. The method of claim 9, further comprising:
2 forming a plurality of accommodation grooves at an upper part of a
3 body of the
4 chuck for accommodating the sliding pocket; and
5 sequentially pressing and inserting into the grooves the base cover of
6 the sliding pocket and the pocket body having the sliding pad
7 floating-coupled inside.

1 11. The method of claim 10, wherein the body of the chuck is made
2 of a material having a thermal expansion coefficient identical or similar to
3 that of the electrostatic chuck.
